



United States Department of the Interior

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In Reply Refer To:

3500
I-27512, I-01441

June 3, 2008

Earthjustice
Lisa Evans
21 Ocean Avenue
Marblehead, MA 01945

Dear Ms. Evans:

On April 7, 2008, BLM received your Petition to Correct Information submitted pursuant to Public Law 106-554 part 515. The petition pertains specifically to the Smoky Canyon Mine Panels F and G Final Environmental Impact Statement (FEIS) and the Final Groundwater Flow and Solute Transport Modeling Report. It was requested in the petition that the BLM withdraw the FEIS and change the inputs to the groundwater model to reflect that no chemical attenuation of selenium occurs at the Smoky Canyon Mine.

Under BLM's Information Quality Guidelines, the BLM has carefully considered the petition, including the rationale provided, the explanation of the effect of the alleged error, and the recommendation for how the information in the FEIS should be corrected (see the enclosed staff memo, dated April 16, 2008). It has been determined that neither of the two documents requires correction with respect to the inclusion of selenium attenuation. Therefore, it was also determined that the FEIS will not be withdrawn or changed in response to this petition.

In regard to the inclusion of selenium attenuation in groundwater analysis, there is not a conflict between the analysis disclosed in the FEIS and the memorandum (JBR memorandum January 20, 2005) in the project record that was prepared for the Draft EIS. The conclusions regarding selenium attenuation from the Draft EIS, which were based on the same JBR memorandum dated January 20, 2005, are discussed in the FEIS and were considered in the analysis. The recommendation of the petition is to withdraw the FEIS so that it can be corrected to reflect no selenium attenuation in the analysis. The FEIS **already** discloses predicted impacts with no selenium attenuation, for Simplot's Proposed Action and all Mining Alternatives with a direct effect on water quality.

To allow the public and decision makers to make comparisons, pages 4-52, 4-65, 4-76, 4-90, 4-96, and 4-97 of the FEIS all clearly display predicted water quality impacts which do not include any attenuation of selenium. All of those pages except page 4-65 include a range of selenium attenuation from No

Attenuation to the agency adopted range of selenium attenuation to greater selenium attenuation. Therefore the FEIS will not be withdrawn or changed in response to this petition.

In accordance with BLM's Information Quality Guidelines, if you are dissatisfied with this response, you may appeal to:

Assistant Director, Information Resources Management, BLM
1849 C Street, NW
Washington, DC 20240

The following four elements should be included in a challenge to information:

1. Specific reference to the information being challenged.
2. Statement specifying why you believe the information fails to satisfy the standards in the BLM, DOI or OMB guidance.
3. How you are affected by the challenged information.
4. The name and address of the person filing the complaint.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Kraayenbrink". The signature is fluid and cursive, with the first name "Joe" being more prominent.

Joe Kraayenbrink
District Manager

Enclosure:

Staff memo, dated April 16, 2008 (13 pp.)

Cc:

BLM, Candelaria
USFS, Timchak
USFS, Jones

DATE: April 16, 2008

TO: Karen Porter, Mike Candelaria, Stephanie Balzarini, Jeff Jones, Ken Paur, Chris Carlson

CC: Larry Timchak, Joe Kraayenbrink

FROM: Bill Stout

RE: Earthjustice Petition to Correct Information in the Smoky Canyon Mine Final EIS and Final Modeling Report.

Introduction

BLM and the FS received a Petition to Correct Information Disseminated by the USDA FS and USDO I BLM pursuant to Public Law 106-554 part 515. This petition was received by both agencies on April 7, 2008. The petition was submitted by Earthjustice on behalf of Greater Yellowstone Coalition and the Natural Resources Defense Council.

The two documents that the petition to correct pertains to are:

- 1) The Smoky Canyon Mine, Panels F & G Final EIS released in October 2007
- 2) Final Modeling Report, Groundwater Flow and Solute Transport, Smoky Canyon Mine Panels F & G Extension Area, April 2007

The GYC received a **2005** memorandum from JBR (Brian Buck and Alan Mayo) to BLM and FS technical staff, dated January 20, 2005, regarding selenium attenuation and its use in the water quality model for the Smoky Canyon Mine **DRAFT** EIS. This document was obtained through a FOIA regarding the Dry Valley Mine. To the best of my knowledge, the GYC has not submitted a FOIA request for information pertaining to attenuation of selenium and its use in the Final EIS.

For clarification, Brian Buck is the project manager and a geologic engineer for JBR Environmental (JBR), the BLM and Forest Service's 3rd party contractor for the preparation of the EIS. Dr. Alan Mayo is the geohydrologist subcontracted to JBR to conduct groundwater analysis and modeling. They have prepared numerous memorandums and reports in the project record. They were the primary authors of all three JBR memos discussed in this memo.

The memo in question, called the Buck/Mayo 2005 memo by the petitioner, was fully considered and is part of the project record for the Smoky Canyon Mine Panels F and G EIS.

Earthjustice asserts 5 reasons [labeled a. through e. in the petition] as to why the Final EIS and the Final Modeling Report should be withdrawn and corrected under the Data Quality Act. In addition, there are numerous other assertions within the text of the petition, most of which are very similar. Assertions are combined below and each assertion is labeled with the corresponding page number and letter from the petition.

While correctly interpreting the conclusions of the 2005 Buck/Mayo memo is key to understanding the issues presented by the petitioner, the bulk of the issues relate to how the information in the memo was used [or was not used] rather than a disagreement with the technical content of the 2005 memo.

Petitioner's Rationale for Correction

ASSERTION: The Buck/Mayo 2005 memo concluded that chemical attenuation should not be included in the Final EIS. (a, page 7)

RESPONSE: This summary, provided by the petitioner, of the Buck/Mayo 2005 memo is incorrect. The Buck/Mayo 2005 memo concluded three things and none of them imply that chemical attenuation of selenium should not be included in the Final EIS. The conclusions of the Buck/Mayo 2005 memo are quoted as follows:

1) *“Evidence for Se attenuation is less clear. Some chemical attenuation may take place along the groundwater flow paths from overburden areas. However, the low pH, high organic and low Redox conditions needed to promote Se chemical attenuation do not appear to occur along the groundwater flow paths in the upper Wells Formation aquifer from overburden areas at the Smoky Canyon Mine or from the planned overburden areas at Panels F and G.”* [Emphasis added]

2) *“One investigator has indicated that the relatively fine-grained, organic-rich shale within backfilled overburden offer the most likely opportunity for selenium reduction and attenuation within the overall flow path (L. Kirk, 2005). However, none of the backfilled Panels F and G pits have been proven to be able to reach the necessary material, chemical, and biological characteristics, which would reliably promote such reducing conditions and possible chemical-biological attenuation.”*

3) *“After review of the information presented in this memo, at this time, we have not been able to identify **quantifiable** chemical attenuation mechanisms for Se that can be used in the Panels F and G groundwater impact analysis and recommend modeling Se attenuation due only to dilution and dispersion.”* [Emphasis added]

To assert that the memo says there should not be chemical attenuation included in the Final EIS is a misrepresentation of the facts. The exact language of the 2005 memo is provided below:

Theoretical and empirical evidence for Se attenuation is documented in the literature (Herring, and others, 2001, Weres and others, 1990, and others).

Theoretical calculations and data, laboratory experiments, and empirical observation of specific environments demonstrate that both Cd and Se attenuation are possible under certain conditions. The crux of the matter is to determine if these conditions exist at the Smoky Canyon Mine and if attenuation will likely occur in the seepage and groundwater pathway under and down gradient of Panels F and G.

It is not known if the drop in Se concentrations between GW-16 and HS [Hoopes Springs] is due solely to mixing and dilution with other groundwater in the Wells Formation aquifer, or if some chemical attenuation also reduces Se concentrations in groundwater along that flow path.

If a large proportion of that groundwater is of background quality, then mixing with groundwater from the Pole Canyon area would have a significant dilution effect on the Se concentrations observed at HS. The magnitude of the dilution in this flow path is unknown so it is not possible to estimate the possible involvement of other attenuation mechanisms in this flow path. We attempted an estimate of the potential dilution occurring between GW-16 and HS with the conservative solutes: nitrate, sulfate and chloride with no success.

It is possible that there is attenuation of Se transport from the E-Panel; however, there is no information to confirm that the attenuation takes place along flow paths within the upper portion of the Wells Formation aquifer. These issues are being further investigated in the AOC site investigation.

With all the above-described sites, it is not possible to determine the effects of the different lithologies within the seepage flow paths internal to the overburden fills on the resulting seepage chemistries. Because of this, the seepage chemistries of these sites are only generally comparable to each other, and the future Panels F and G overburden fill conditions. However, this does not detract from the usefulness of these data for indicating potential chemical attenuation mechanisms that might occur outside of these overburden fills.

*Empirical data obtained to date from GW-11, GW-IW, GW-CW, GW-16, GW-18, DC-MW-5, MC-MW-1, the major springs down gradient of Panels F and G and the theoretical information discussed in this memo indicate that chemical attenuation of Se has not been demonstrated for flow pathways through the upper Wells Formation aquifer at the Smoky Canyon Mine. After review of the information presented in this memo, **at this time, we have not been able to identify quantifiable chemical attenuation mechanisms for Se that can be used in the Panels F and G groundwater impact analysis and recommend modeling Se attenuation due only to dilution and dispersion.***

As the above quoted text from the Buck/Mayo 2005 memo indicates, the authors clearly indicated a number of times the possibility that chemical attenuation of selenium in the groundwater flow paths under the Smoky Canyon Mine could potentially occur but that there was insufficient data at that time to confirm the existence of attenuation or quantify it to the

degree that it could be used in the groundwater impact analysis then being planned [for the Draft EIS]. The memo was written before the Draft EIS was completed in support of that document, not the Final EIS.

The petitioner's incorrect restatement of the conclusions contained in the Buck/Mayo 2005 is needed to maintain that the analysis in the Final EIS, which included selenium attenuation, is in contradiction to the Buck/Mayo 2005 memo. The agencies and the authors of the memo summarized the selenium attenuation aspect of the 11-page Buck/Mayo memo in the Draft EIS in the following way on page 4-36:

*“A review was made of literature and empirical data collected from the Smoky Canyon Mine related to the potential chemical attenuation of selenium and cadmium in the flow paths being modeled from the Panels F and G overburden sources to the points of groundwater discharge to the surface environment (JBR 2005a). There is abundant information in the literature supporting chemical attenuation of selenium in specific chemical and biological environments. **However, at the present time, it was concluded that there is insufficient evidence that these specific chemical environments exist to the degree necessary within the modeled flow paths for Panels F and G to allow estimation of significant chemical attenuation of selenium.** Although there may be some attenuation of selenium in these flow paths, none has been used in the fate and transport modeling for the groundwater impact assessment.”* [Emphasis added]

The language of the Draft EIS indicates that attenuation of selenium was being considered by the agencies but at that time, there was insufficient information to include attenuation in the groundwater impact analysis. This is consistent with the conclusions of Buck/Mayo 2005. At the time of the Draft EIS, Buck, Mayo, and the agencies did not reject the potential for selenium attenuation in the subject flow paths; rather they made it clear that more information would be needed to quantify attenuation before it could be considered in the impact analysis.

As part of the public input process comments were provided on the Draft EIS. At that time, the agencies received additional literature, new site-specific data from the CERCLA investigation at Smoky Canyon Mine, new site-specific laboratory testing from the Smoky Canyon Mine, and new laboratory data from the Dry Valley Mine. The new information was fully considered as documented in another memo from Buck and Mayo dated March 12, 2006 titled, “Initial thoughts on Simplot Preliminary Hydrology Comments”. This 2006 memo starts by summarizing the conclusions of the 2005 memo in this manner:

“Our previous recommendations to the agencies are contained in our January 20, 2005 memo on: EVALUATION OF THE POTENTIAL FOR CADMIUM AND SELENIUM ATTENUATION - F AND G PANELS, SMOKY CANYON MINE. In that memo we concluded that literature supported chemical attenuation of selenium in certain physical environments but that literature did not specifically support significant attenuation of selenate in the expected chemical conditions and lithologies of the subsurface flow path at Panels F and G. Our conclusions included the following statements:

“Some chemical attenuation may take place along the groundwater flow paths from overburden areas. However, the low pH, high organic and low Redox conditions needed to promote Se chemical attenuation do not appear to occur along the groundwater flow paths in the upper Wells Formation aquifer from overburden areas at the Smoky Canyon Mine or from the planned overburden areas at Panels F and G. . . . After review of the information presented in this memo, at this time, we have not been able to identify quantifiable chemical attenuation mechanisms for Se that can be used in the Panels F and G groundwater impact analysis and recommend modeling Se attenuation due only to dilution and dispersion.”

Thus we did not close the door on use of geochemical attenuation along the Wells Formation flow path but did not have sufficient evidence that such occurred to quantify it enough for the purposes of our groundwater impact analyses.

Based on the new information obtained in comments to the Draft EIS, the Final EIS discusses the inclusion of selenium attenuation in several locations. On page 4-43, the Final EIS again summarizes the conclusions of [and correctly cites to] the Draft EIS which represents the conclusions of the 2005 Buck/Mayo memo.

A review was made of literature and empirical data collected from the Smoky Canyon Mine related to potential chemical attenuation of selenium and cadmium in the flow paths being modeled from the Panels F and G overburden sources to the points of groundwater discharge to the surface environment (JBR 2007). There is abundant information in the literature supporting chemical attenuation of selenium in specific chemical and biological environments. However, at the time the DEIS was prepared, it was concluded that there was insufficient evidence that these specific chemical environments exist to the degree necessary within the modeled flow paths for Panels F and G to allow estimation of significant chemical attenuation of selenium. The DEIS indicated, “Although there may be some chemical attenuation of selenium in these flow paths, none has been used in the fate and transport modeling for the groundwater impact assessment.” Since the DEIS was completed, additional information has been obtained on selenium attenuation in the Wells formation that can be used in this impact analysis and is described in the following section.

Neither the memo prepared by Buck and Mayo in 2005 to discuss possible use of selenium attenuation in the groundwater quality analysis, the Draft EIS, the Final EIS, or the 2006 memo in the record support the petitioner’s assertion that the 2005 Buck/Mayo memo concluded that chemical attenuation should not be included in the Final EIS.

ASSERTIONS: Neither the 2007 Final Modeling Report or the 2007 Final EIS mention the existence of the Buck/Mayo memo, which presents results that prove the Final EIS relies on a faulty conceptual model. (a, page 7)

The Final EIS fails to “use sound analytical methods in carrying out scientific....analysis” by not incorporating the findings of the Buck/Mayo memo of 2005. (a, page 6)

The Final EIS and Final Modeling Report fail to “use reasonably reliable and reasonably timely data and information” by justifying and including attenuation in direct contradiction of the data in the Buck/Mayo memo. (b, page 9)

Points from the Buck/Mayo memo prove that some crucial and “reasonably reliable data and information” were not included in the Final EIS modeling. (b, page 9)

Failure to use the Buck/Mayo memo and its conclusion that attenuation should not be considered in the modeling for the Final EIS is a blatant failure to use best science and supporting studies. (c, page 10)

The Final EIS ignored or misinterpreted the memo created by the agencies own experts, and therefore any decisions made are not completely informed and are flawed. (d, page 11)

RESPONSE:

Collectively these statements in the petition assert that the 2005 Buck/Mayo memo regarding selenium attenuation or the information contained within the memo was omitted from the Final EIS and therefore the analysis in the Final EIS is flawed. This assertion is incorrect. The information contained in the 2005 Buck/Mayo is fully considered in the analysis of the Final EIS.

The 2005 Buck/Mayo memo was prepared to inform the agencies regarding theoretical selenium attenuation and site-specific considerations. At that time, this memo and its conclusions were considered and adopted by the agencies. This is indicated by references to the conclusions in the 2005 Modeling Report and the 2005 Draft EIS. The memo was summarized and **cited** (page 31) in the 2005 Modeling Report that was prepared for the Draft EIS. The Draft EIS cites (page 4-36) to the 2005 Modeling Report and summarizes the conclusions this way:

*“A review was made of literature and empirical data collected from the Smoky Canyon Mine related to the potential chemical attenuation of selenium and cadmium in the flow paths being modeled from the Panels F and G overburden sources to the points of groundwater discharge to the surface environment (JBR 2005a). There is abundant information in the literature supporting chemical attenuation of selenium in specific chemical and biological environments. **However, at the present time, it was concluded that there is insufficient evidence that these specific chemical environments exist to the degree necessary within the modeled flow paths for Panels F and G to allow estimation of significant chemical attenuation of selenium.** Although there may be some attenuation of selenium in these flow paths, none has been used in the fate and transport modeling for the groundwater impact assessment.”*

As the 2005 Buck/Mayo memo suggests, the DEIS does not include selenium attenuation in the analysis. As part of the public involvement process comments were provided on the Draft EIS. At that time, Simplot provided additional literature, site-specific data from the CERCLA

investigation at Smoky Canyon Mine, site-specific laboratory testing from the Smoky Canyon Mine, and laboratory data from the Dry Valley Mine. The agencies looked critically at this new information which was documented in a 2006 Buck/Mayo memo titled “Initial Thoughts on Simplot Preliminary Hydrology Comments”. In addressing the new information, the 2006 memo first addresses the previous conclusions drawn in the 2005 memo.

“Our previous recommendations to the agencies are contained in our January 20, 2005 memo on: *EVALUATION OF THE POTENTIAL FOR CADMIUM AND SELENIUM ATTENUATION - F AND G PANELS, SMOKY CANYON MINE*. In that memo we concluded that literature supported chemical attenuation of selenium in certain physical environmental but that literature did not specifically support significant attenuation of selenate in the expected chemical conditions and lithologies of the subsurface flow path at Panels F and G. Our conclusions included the following statements:

“Some chemical attenuation may take place along the groundwater flow paths from overburden areas. However, the low pH, high organic and low Redox conditions needed to promote Se chemical attenuation do not appear to occur along the groundwater flow paths in the upper Wells Formation aquifer from overburden areas at the Smoky Canyon Mine or from the planned overburden areas at Panels F and G. . . . After review of the information presented in this memo, at this time, we have not been able to identify quantifiable chemical attenuation mechanisms for Se that can be used in the Panels F and G groundwater impact analysis and recommend modeling Se attenuation due only to dilution and dispersion.”

Thus we did not close the door on use of geochemical attenuation along the Wells Formation flow path but did not have sufficient evidence that such occurred to quantify it enough for the purposes of our groundwater impact analyses.”

The 2006 memo, which was prepared to evaluate the new data, proceeds to make the following statements in regard to the new selenium attenuation information:

“We think Simplot’s (Newfields) preliminary hydrology comments on comparing the ROM Control and Fate and Transport column leach test, performed by Maxim Technologies, sheds new light on the potential for selenium attenuation in the Well Formation below ROM overburden waste material. Newfields compared the mass loading from pore volume 1 (i.e., PVI) from ROM unsaturated, ROM fate and transport unsaturated, and ROM fate and transport partially saturated column tests. In their analysis they compared the mass of Se leached from the ROM control column in PV 1 with the mass of Se collected from similar PV 1 concentrations collected after the pore volume of water passed through Wells Formation material in the fate and transport columns.

At face value, we think these calculations provide new evidence for Se attenuation after contact with saturated and unsaturated Wells Formation materials. There are several issues regarding the design and implementation of the column tests which tend to complicate and possibly mask the effect of this attenuation measurement.

Despite the above complications, we think the column test data do suggest some Se attenuation by flow through the Wells Formation materials. We would appreciate the agencies' approval of our use of data from the ROM control columns and fate and transport columns as we continue to review Simplot's preliminary comments. We are asking for this approval because the agencies have previously decided not to use data from the subject test columns in the EIS.

It is our understanding that Newfields may be conducting further tests (roll testing) to validate Well Formation attenuation, and that these data may be available within the near future. If these new data substantiate attenuation, we believe we could accommodate some attenuation in the groundwater fate and transport model with the numerical value for the partitioning coefficient being based on a combination of information from the column tests and the bottle roll tests."

Based on this information, and further investigation as documented in a May 4, 2006 memo from Buck and Mayo entitled "Simplot Hydrology Comments on Panels F&G DEIS", the agencies adopted a conservative selenium attenuation factor for use in the Final EIS. [All three of the Buck/Mayo memos described above are in the EIS Project Record.]

Section 1.7 (page 1-26) of the Final EIS clearly points out this change and briefly discusses the consistency with conclusion in the Draft EIS [which are based on the 2005 Buck/Mayo memo]. Section 4.3 of the Final EIS fully describes the inclusion of selenium attenuation in the vadose zone. It starts by restating the conclusions contained in the Draft EIS on page 4-43. This paragraph indicates that the Draft EIS acknowledged the presence of selenium attenuation, but there was insufficient data to quantify it for use in modeling. This paragraph is as follows:

"A review was made of literature and empirical data collected from the Smoky Canyon Mine related to potential chemical attenuation of selenium and cadmium in the flow paths being modeled from the Panels F and G overburden sources to the points of groundwater discharge to the surface environment (JBR 2007). There is abundant information in the literature supporting chemical attenuation of selenium in specific chemical and biological environments. However, at the time the DEIS was prepared, it was concluded that there was insufficient evidence that these specific chemical environments exist to the degree necessary within the modeled flow paths for Panels F and G to allow estimation of significant chemical attenuation of selenium. The DEIS indicated, "Although there may be some chemical attenuation of selenium in these flow paths, none has been used in the fate and transport modeling for the groundwater impact assessment." Since the DEIS was completed, additional information has been obtained on selenium attenuation in the Wells formation that can be used in this impact analysis and is described in the following section".

Pages 4-43 through page 4-49 of the Final EIS describe the new information received and considered since the Draft EIS and the agency adoption of 15-25% attenuation when the evidence indicates a possible range of selenium attenuation between 30% and 64%. All the information on the selenium attenuation information from the Buck/Mayo 2005 memo and the new data received since the Draft EIS is also described on pages 34 through 43 of the 2007

Groundwater Modeling Report. The text in the groundwater modeling report specifically **cites** the Buck/Mayo 2005 memo and includes information from it within the report.

Page 4-48 of the Final EIS describes that the attenuation would take place in the unsaturated zone between the backfilled pits and the aquifer. The text is shown below:

“Selenium contained in overburden leachate at Panels F and G would need to pass through a significant thickness of unsaturated Wells formation before entering the Wells formation aquifer. Estimated thickness of the Wells formation vadose zone under Panels F and G range from 200 to 1,200 feet. This unit includes the upper Grandeur Limestone member of the Park City formation, fine-grained sandstone with interbeds of limestone and dolomite and cherty limestone with sandstone interbeds. There is abundant calcareous rock in this flow path, which could provide attenuation reaction media as described in the literature. Iron and minor clay content of the unit could also contribute to the selenium attenuation.”

In summary, the project record clearly demonstrates that the information contained in and the conclusions drawn in the 2005 Buck/Mayo were considered in the analysis contained in the Final EIS. They also show that including selenium attenuation is not contradictory of the 2005 Buck/Mayo. The Buck/Mayo 2005 memo clearly indicates that selenium attenuation could possibly take place in the groundwater flow paths but that insufficient information was available at that time to quantify this attenuation. The information included in the two Buck/Mayo memos of 2006 indicates consideration and a critical review of new information in the impact analysis. The 2007 groundwater modeling report also discusses the Buck/Mayo 2005 memo and provides an explanation of how selenium attenuation was quantified for the groundwater impact analysis that was eventually included in the Final EIS.

ASSERTION: In the Final EIS, the agencies failed to include the findings that do not support the analysis.(e, page 11)

RESPONSE: It is incorrect to state that the findings of the 2005 Buck/Mayo do not support the analysis.

The first conclusion in the 2005 Buck/Mayo memo is that some chemical attenuation may take place along groundwater flow paths, but there is no field evidence that the requisite pH and Redox conditions for significant Se attenuation in the Wells Formation aquifer between Panels F and G and these springs are present. The Final EIS includes an attenuation factor based on new empirical and laboratory data that were not available when the Buck/Mayo 2005 memo or the Draft EIS were written. The Final EIS clearly indicates why the agencies revised their approach

of including an attenuation factor, based on these new data. The 2005 memo, the Draft EIS, and the Final EIS are all consistent in this respect.

The second conclusion in the 2005 Buck/Mayo memo is that none of the backfilled Panels F and G pits have been proven to be able to reach the necessary material, chemical, and biological characteristics, which would reliably promote such reducing conditions and possible chemical-biological attenuation. For the reasons described in the 2005 Buck/Mayo memo no reduction of selenium in the backfill was included in the Final EIS analysis. Again, the 2005 memo, the Draft EIS, and the Final EIS are all consistent in this respect.

The third conclusion in the 2005 Buck/Mayo memo is that “After review of the information presented in this [2005] memo, *at this time*, we have not been able to identify *quantifiable* chemical attenuation mechanisms for Se that can be used in the Panels F and G groundwater impact analysis and recommend modeling Se attenuation due only to dilution and dispersion. In comments on the Draft EIS the agencies received sufficient information to conclude that selenium attenuation was quantifiable. This information is considered in the 2006 Buck/Mayo titled “Initial Thoughts on Simplot Preliminary Hydrology Comments”, the 2006 memo from Buck and Mayo titled “Simplot Hydrology Comments on Panels F&G DEIS”, and the 2007 Modeling Report and the Final EIS. In restating the conclusions of the Draft EIS in the Final EIS, the Final EIS clearly considers the relationship between the information in the 2005 Buck/Mayo memo and the new information.

The analysis contained in the Final EIS and the content of the 2005 Buck/Mayo memo are consistent.

ASSERTION: No attempt was made to reconcile the conclusions in the Buck/Mayo memo with those in the Final EIS. (c, page 10)

RESPONSE: The 2005 Buck/Mayo memo and the use of selenium attenuation in the Final EIS are not contradictory. None of the conclusions in the 2005 Buck/Mayo memo permanently exclude use of a selenium attenuation factor as was used in the Final EIS analysis. Rather, Buck/Mayo 2005 indicates that selenium attenuation was possible but there was insufficient data available, in 2005 to quantify attenuation. Data provided by Simplot and their environmental consultants during the public comment period on the Draft EIS was objectively considered by the agencies and their consultants before any of the findings were included in the Final EIS.

Page 4-43 of the Final EIS discusses the relationship between the conclusions of the Draft EIS and the new information.

ASSERTION: Without chemical attenuation of selenium in groundwater, all action alternatives would be illegal. (a, page 7)

RESPONSE: This assertion is incorrect. The Final EIS fully discloses in several locations that the Preferred Alternative, Alternative D, would comply with applicable groundwater and surface water quality standards with or without selenium attenuation in the vadose zone.

The Draft EIS and the Final EIS disclose to the public and decision makers that Simplot's Proposed Action, and mining alternatives A, B, and C would not be in compliance without further mitigation. As such, the Draft EIS and the Final EIS both reflect that Alternative D, construction of a cover to limit leaching of selenium and release to the groundwater, as part of the Agency Preferred Alternative.

The Final EIS describes the impacts to groundwater and surface water in Section 4.3. Tables of the predicted impacts are included in the text. These tables not only include the impacts with the agency adopted range of selenium attenuation (15 – 25%), but they also include predicted impacts with a wider range including no attenuation and two levels of even more attenuation than adopted by the agencies. This was done to comparatively represent and disclose the range of attenuation suggested by commenters on the Draft EIS. Tables 4.3-15 and 4.3-16 from the Final EIS disclosing predicted groundwater impacts from the Agency Preferred Alternative are provided below. They clearly show analysis with no attenuation is contained in the Final EIS. Table 4.3-15 (page 4-76) shows selenium concentrations with no attenuation are below the groundwater standard of 0.050 mg/l selenium. Table 4.3-16 (page 4-76) shows selenium concentrations for down gradient springs with no attenuation are below the surface water standard of 0.005 mg/l selenium.

TABLE 4.3-15 MODELED PEAK SELENIUM CONCENTRATIONS AT OBSERVATION POINTS FOR ALTERNATIVE D STORE AND RELEASE COVER

INPUTS	POINT A		POINT B		POINT C		POINT D	
	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)
No Atten.	64	0.0186	25	0.0037	25	0.00496	27	0.0178
15% Atten.	64	0.0158	25	0.0032	25	0.0042	27	0.0152
25% Atten.	64	0.0140	25	0.0028	25	0.0037	27	0.0134
30% Atten.	64	0.0130	25	0.0026	25	0.0035	27	0.0125
2" + 30% Atten.	64	0.0071	25	0.0014	25	0.0019	27	0.0067

**TABLE 4.3-16 MODELED PEAK SELENIUM CONCENTRATIONS AT DISCHARGE
POINTS FOR ALTERNATIVE D STORE AND RELEASE COVER**

INPUTS	SF SAGE SPRING		BOOKS		DEER CREEK		CROW CREEK	
	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)	TIME (YR)	CONC (MG/L)
No Atten.	118	0.0028	379	0.0022	60	0.0037*	420	0.0018
15% Atten.	118	0.0024	379	0.0019	60	0.0031*	420	0.0015
25% Atten.	118	0.0021	379	0.0017	60	0.0028*	420	0.0013
30% Atten.	118	0.0020	379	0.0015	60	0.0026*	420	0.0012
2" + 30% Atten.	118	0.0011	379	0.0008	60	0.0014*	420	0.0007

* Concentration in groundwater discharged to creek before mixing groundwater discharge with stream water

In addition to the groundwater impact analysis the Final EIS also provided impact analysis regarding surface water. Table 4.3-22 describes direct and indirect impacts to surface water for Alternative D using current baseline conditions (including existing surface water contamination from the Smoky Canyon Mine). This table also shows the predicted impacts with no attenuation, as well as the agency adopted range (15 – 25%) and more attenuation. Note that the analysis indicates that the Agency Preferred Alternative would not be in full compliance in Sage Creek regardless of selenium attenuation. However, the following table, Table 4.3-23 includes the predicted effects of the Agency Preferred Alternative along with the currently constructed mitigation measures at Smoky Canyon Mine and indicates that the project would comply with the surface water standard of .005 mg/l selenium either with the agency adopted attenuation range or with no attenuation.

**TABLE 4.3-22 ESTIMATED SELENIUM CONCENTRATIONS (MG/L) IN AREA STREAMS
FOR ALTERNATIVE D STORE AND RELEASE COVER (0.6 IN/YR)**

LOCATION	NO ATTEN.	15% ATTEN.	25% ATTEN.	30% ATTEN.	2" + 30% ATTEN.
SUMMER/FALL DURING IRRIGATION SEASON					
Mouth of Deer Creek	0.0032	0.0028	0.0025	0.0023	0.0014
Crow Downstream of Deer Creek	0.0017	0.0015	0.0014	0.0013	0.0008
Mouth of S.F. Sage Creek	0.0051	0.0048	0.0046	0.0045	0.0039
Mouth of Sage Creek	0.0072	0.0070	0.0069	0.0069	0.0066
Crow Downstream of Sage Creek	0.0051	0.0049	0.0048	0.0048	0.0044
LATE FALL/WINTER BASEFLOWS WITHOUT IRRIGATION DIVERSIONS					
Mouth of Deer Creek	0.0032	0.0028	0.0025	0.0023	0.0014
Crow Downstream of Deer Creek	0.0013	0.0012	0.0011	0.0011	0.0008
Mouth of S.F. Sage Creek	0.0051	0.0048	0.0046	0.0045	0.0039
Mouth of Sage Creek	0.0072	0.0070	0.0069	0.0069	0.0066
Crow Downstream of Sage Creek	0.0041	0.0040	0.0039	0.0039	0.0036

TABLE 4.3-23 ESTIMATED SELENIUM CONCENTRATIONS (MG/L) IN SAGE CREEK AND CROW CREEK FOR ALTERNATIVE D STORE AND RELEASE COVER (0.6 IN/YR), ASSUMING SUCCESSFUL RECLAMATION AT E PANEL AND WITH HOOPES SPRINGS SELENIUM REMOVAL ACTION

LOCATION	NO ATTEN.	15% ATTEN.	25% ATTEN.	30% ATTEN.	2" + 30% ATTEN.
SUMMER/FALL DURING IRRIGATION SEASON					
Mouth of South Fork Sage Creek	0.0037	0.0034	0.0032	0.0031	0.0025
Mouth of Sage Creek	0.0036	0.0034	0.0034	0.0033	0.0030
Crow Downstream of Sage Creek	0.0029	0.0027	0.0026	0.0025	0.0022
LATE FALL/WINTER BASEFLOWS WITHOUT IRRIGATION DIVERSIONS					
Mouth of South Fork Sage Creek	0.0037	0.0034	0.0032	0.0031	0.0025
Mouth of Sage Creek	0.0036	0.0034	0.0034	0.0033	0.0030
Crow Downstream of Sage Creek	0.0024	0.0023	0.0022	0.0022	0.0019

Summary

In the petitioner's Explanation of the Alleged Error, they make two points 1) The effect of the failure to not include the 2005 Buck/Mayo memo in the development of the recent Smoky Canyon Mine Panels F and G Final EIS and JBR's groundwater model is that all action alternatives would be illegal, and 2) the conclusions in the 2005 Buck/Mayo memo are in direct conflict with the conclusions in the Final EIS.

Both assertions are shown to be incorrect. The Final EIS **does** include a summary of the conclusions from the 2005 Buck/Mayo memo. It also references the 2007 Groundwater Modeling Report which cites to the 2005 Buck/Mayo memo. The Final EIS clearly shows that the Preferred Alternative would be in compliance with applicable water quality standards even without consideration of selenium attenuation. The conclusions of the 2005 Buck/Mayo memo are **not** in conflict with the conclusions in the Final EIS.

In their recommendation for how the information should be corrected, the petitioner states that the Final EIS should be withdrawn and the inputs to the groundwater analysis should be changed to reflect that no chemical attenuation takes place at Smoky Canyon Mine. As shown above, the impact analysis contained in the Final Modeling Report and the Final EIS already reflect this condition. The Final EIS discloses for the public and decision makers the predicted impacts for the range of selenium attenuation accepted by the agency **and** with no selenium attenuation.